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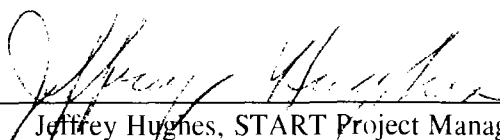
LETTER REPORT  
FOR  
STICKNEY MERCURY SPILL  
STICKNEY, COOK COUNTY, ILLINOIS  
TDD: S05-0009-026  
PAN: 0P2601RZXX


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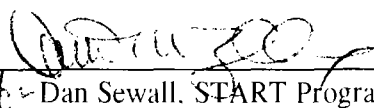
November 7, 2000

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Emergency and Enforcement Response Branch  
77 West Jackson Boulevard  
Chicago, Illinois 60604

Prepared by:  Date: 11/7/00  
Jeffrey Hughes, START Project Manager

Reviewed by:  Date: 11/7/00  
Carl Stineman, START Risk Assessor

Approved by:  Date: 11/7/00  
Dan Sewall, START Program Manager



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## ecology and environment, inc.

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November 7, 2000

Ms. Gail Nabasny  
START Contracting Officer  
Emergency Support Section  
United States Environmental Protection Agency  
77 West Jackson Boulevard - HSE-5J  
Chicago, Illinois 60604

Re: Stickney Mercury Spill  
Stickney, Cook County, IL  
TDD: SO5-0009-026  
PAN: 0P2601RZXX

Dear Ms. Nabasny:

On the evening of September 27, 2000, the United States Environmental Protection Agency (U.S. EPA) tasked the Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) under Technical Direction Document (TDD) SO5-0009-026, to provide technical support in response to a mercury spill at the Stickney Mercury Spill (Stickney) site in Stickney, Cook County, Illinois. Additional START activities were to conduct air monitoring at the site and to screen a nearby elementary school and a private residence for the presence of elemental mercury. START members conducting emergency response activities were Jeffrey Hughes, Tim Calloway, and Vincent Gee under the direction of On-Scene Coordinators (OSCs) Charles Gebien and Stavros Emmanouil. Photodocumentation is presented in Attachment A.

The Stickney site is located in the alley east of 4215 South Harlem Avenue in Stickney, Cook County, Illinois (latitude 41°48'54"N and longitude 87°48'06"W) (Attachment B, Figure 1). The Stickney site is located in a western suburb of Chicago, Illinois, and is surrounded on all sides by residences.

On September 27, 2000, at approximately 1745 hours, OSC Gebien requested START assistance at the scene of a mercury spill. He informed START member Hughes that a large quantity of mercury had been recovered earlier in the day near a dumpster at the Stickney site. When START members Calloway and Hughes reached the site, at approximately 1945 hours, OSC Gebien and clean-up contractor Ferguson Harbours, Inc. (FHI), were already on site. START began screening vehicle tires in the adjacent parking lot (Attachment B, Figure 2) with a Jerome® Mercury Vapor Analyzer (MVA). START and the FHI crew screened 31 vehicles and the parking lot surface adjacent to the spill location. All the vehicle tires registered zero readings on the MVA, however, there were some spots in the parking lot with mercury vapor concentrations as high as 0.003 milligrams per cubic meter (mg/m<sup>3</sup>). The action level established for mercury vapor by the Agency for Toxic Substances and Disease Registry (ATSDR) is 0.0003 mg/m<sup>3</sup>. These spots were marked with chalk. After the vehicles were screened and a clean pathway out of the parking lot was determined, residents were allowed to

move their cars out of the lot.

While START and FHI personnel were screening cars in the parking lot, four teenagers walked down through the alley despite it clearly being marked with yellow "CAUTION" tape. START screened the teenagers' shoes and one pair registered an elevated level of mercury on the MVA. As a precaution, Stickney Fire Chief Larry Meyer, Incident Commander, requested that all the teens leave their shoes until they could be cleaned with a mercury-absorbent solution (HgX). Fire Department personnel drove the teens home.

At 2200 hours on the night of September 27, START accompanied Fire Department personnel to Home Elementary School to conduct screening. The school is located approximately 0.3 mile from the Stickney site and officials feared that children may have tracked mercury from the site to school. START screened all three entries, all bathrooms, and the cafeteria and found no elevated levels of mercury in the school.

START member Hughes mobilized to the site at 0730 hours on the morning of September 28, 2000. FHI crew cleaned the marked hot spots in the alley and parking lot with HgX. After completing the cleaning, the crew used mercury vacuums in the alley on an area approximately 350 feet long and 12 feet wide. During this time START was screening all the dumpsters and roll-out garbage containers in the alley. OSC Gebien, other U.S. EPA personnel, and Illinois EPA representative Ed Osowski checked the dumpsters and roll-out containers for the container of mercury. Two roll-out containers in the area of the spill were found to have mercury vapor levels ranging from 0.007 to 0.014 mg/m<sup>3</sup>. These containers were marked and the contents were later put into a 55-gallon drum for disposal.

Once FHI completed vacuuming the alley they began to apply a concrete sealant to the same 350 feet by 12 feet section of the alley. During this time START continued to take photodocumentation and to screen the area with the MVA. START also screened the shoes of the teenagers after they were decontaminated with HgX. The application of the concrete sealant brought the mercury vapor level near the spill down from 0.077 mg/m<sup>3</sup> to 0.003 mg/m<sup>3</sup> almost immediately. After the sealant was applied and all waste material and used personal protective equipment (PPE) was placed in 55-gallon drums START and FHI left the site for the day.

On the morning of September 29, 2000, START and FHI screened the alley. All reading on the MVA were 0.000 mg/m<sup>3</sup>. The "CAUTION" tape was removed except for an area approximately 125 feet long where the sealant still was not dry. The Stickney Fire Department would remove the tape later in the day when the area dried. OSC Gebien requested START member Hughes to screen the alley north of the site from 41<sup>st</sup> Street to 42<sup>nd</sup> Street and look for any visible beads of mercury. START found no visible mercury and all readings in the alley were 0.000 mg/m<sup>3</sup>. The drums of waste and used PPE were removed from site at 1130 hours.

On the morning of September 30, 2000, START member Gee assisted OSC Emmanouil in screening a residence at [REDACTED] with a Lumex® Multifunctional Mercury Analyzer. This residence is located one block from the location that the spilled mercury was discovered and readings as high as 0.015 mg/m<sup>3</sup> were registered during screening by the Illinois Department of Public Health on Friday, September 29. Overnight the house was heated and then ventilated to eliminate any mercury vapors. The highest reading in the residence on September 30, was 30 nanograms per cubic meter (ng/m<sup>3</sup>), equal to 0.00003 mg/m<sup>3</sup>.

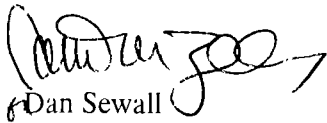
On the morning of October 11, 2000, START member Hughes returned to the Stickney site to conduct follow-up screening. All readings taken with the MVA in the alley and parking lot were 0.000 mg/m<sup>3</sup>. Most readings were done in the former hot zone, where the mercury was spilled, and in the roll-out containers that previously had elevated levels of mercury vapors.

This Letter Report completes the requirements of this TDD. If you have any questions or need any additional information, please contact our Chicago office at (312) 578-9243.

Sincerely,



Jeffrey Hughes  
START Project Manager



Dan Sewall  
START Program Manager

Attachments: A Photodocumentation  
B Site Maps

cc: Charles Gebien, OSC, U.S. EPA  
File

**Attachment A**

**Photodocumentation**



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Setting up staging and decontamination areas.

**Date:** September 28, 2000  
**Direction:** South

**Time:** 0845  
**Photographer:** J. Hughes



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Setting up to wash and vacuum 'hot' areas.

**Date:** September 28, 2000  
**Direction:** South

**Time:** 0930  
**Photographer:** J. Hughes





<b>Site:</b>	Stickney Mercury Spill	<b>Date:</b>	September 28, 2000	<b>Time:</b>	0940
<b>Location:</b>	Stickney, Illinois	<b>Direction:</b>	North	<b>Photographer:</b>	J. Hughes
<b>Subject:</b>	Area near dumpster where mercury was found.				



<b>Site:</b>	Stickney Mercury Spill	<b>Date:</b>	September 28, 2000	<b>Time:</b>	0941
<b>Location:</b>	Stickney, Illinois	<b>Direction:</b>	Northeast	<b>Photographer:</b>	J. Hughes
<b>Subject:</b>	Washing 'hot' area with HgX mixture.				





**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** View of alley from south end.

**Date:** September 28, 2000  
**Direction:** North

**Time:** 0951  
**Photographer:** J. Hughes



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Inoperable vehicles in parking lot.

**Date:** September 28, 2000  
**Direction:** Northwest

**Time:** 1100  
**Photographer:** J. Hughes





**Site:** Stickney Mercury Spill      **Date:** September 28, 2000      **Time:** 1138  
**Location:** Stickney, Illinois      **Direction:** East      **Photographer:** J. Hughes  
**Subject:** Using mercury vacuums in alley.



**Site:** Stickney Mercury Spill      **Date:** September 28, 2000      **Time:** 1205  
**Location:** Stickney, Illinois      **Direction:** Southwest      **Photographer:** J. Hughes  
**Subject:** News media at site.





**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Jar of mercury brought from another site.

**Date:** September 28, 2000  
**Direction:** Down

**Time:** 1315  
**Photographer:** J. Hughes



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Roll-out can with mercury vapor analyzer reading of 0.014 mg/m<sup>3</sup>.

**Date:** September 28, 2000  
**Direction:** Southeast

**Time:** 1345  
**Photographer:** J. Hughes





**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Using mercury vacuums in alley.

**Date:** September 28, 2000  
**Direction:** Southeast

**Time:** 1355  
**Photographer:** J. Hughes



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Using propane torch to heat expansion joint in alley.

**Date:** September 28, 2000  
**Direction:** Northwest

**Time:** 1410  
**Photographer:** J. Hughes





<b>Site:</b>	Stickney Mercury Spill	<b>Date:</b>	September 28, 2000	<b>Time:</b>	1430
<b>Location:</b>	Stickney, Illinois	<b>Direction:</b>	Down	<b>Photographer:</b>	J. Hughes
<b>Subject:</b>	Shoes worn by teenagers through hot zone.				



<b>Site:</b>	Stickney Mercury Spill	<b>Date:</b>	September 28, 2000	<b>Time:</b>	1500
<b>Location:</b>	Stickney, Illinois	<b>Direction:</b>	Southeast	<b>Photographer:</b>	J. Hughes
<b>Subject:</b>	Using concrete sealant in hot zone.				





**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Container of concrete sealant.

**Date:** September 28, 2000  
**Direction:** Down

**Time:** 1525  
**Photographer:** J. Hughes



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Drums of waste material.

**Date:** September 29, 2000  
**Direction:** Northeast

**Time:** 0915  
**Photographer:** J. Hughes





<b>Site:</b>	Stickney Mercury Spill	<b>Date:</b>	September 29, 2000	<b>Time:</b>	0917
<b>Location:</b>	Stickney, Illinois	<b>Direction:</b>	Down	<b>Photographer:</b>	J. Hughes
<b>Subject:</b>	Shoes after being cleaned with HgX.				



<b>Site:</b>	Stickney Mercury Spill	<b>Date:</b>	September 29, 2000	<b>Time:</b>	0935
<b>Location:</b>	Stickney, Illinois	<b>Direction:</b>	Northeast	<b>Photographer:</b>	J. Hughes
<b>Subject:</b>	Area where sealant is still wet.				





**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Area where sealant is still wet.

**Date:** September 29, 2000  
**Direction:** Southeast

**Time:** 0938  
**Photographer:** J. Hughes



**Site:** Stickney Mercury Spill  
**Location:** Stickney, Illinois  
**Subject:** Drums of waste being removed from site.

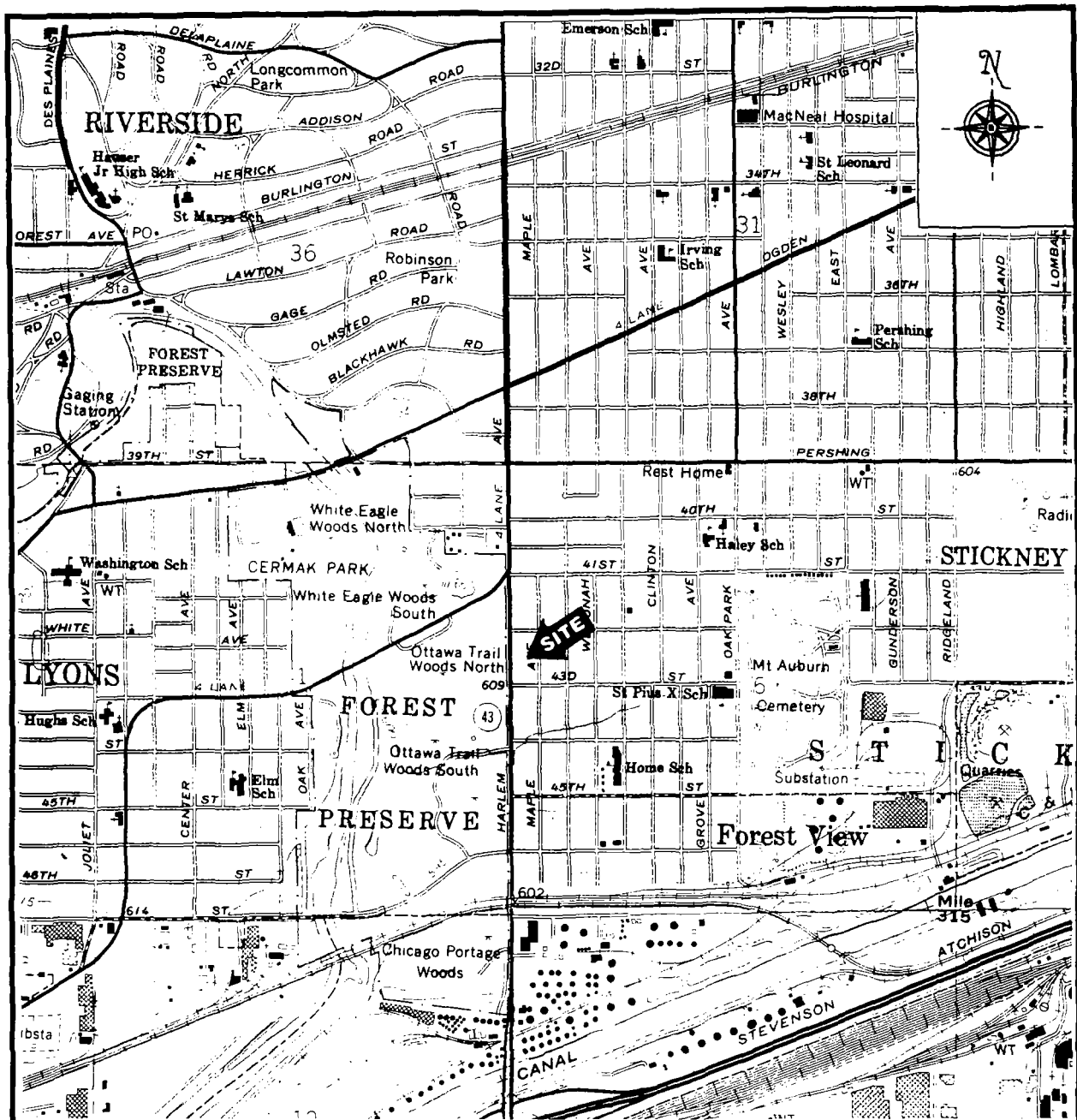
**Date:** September 29, 2000  
**Direction:** Northeast

**Time:** 1127  
**Photographer:** J. Hughes

**Attachment B**

**Site Maps**





Quadrangle Location

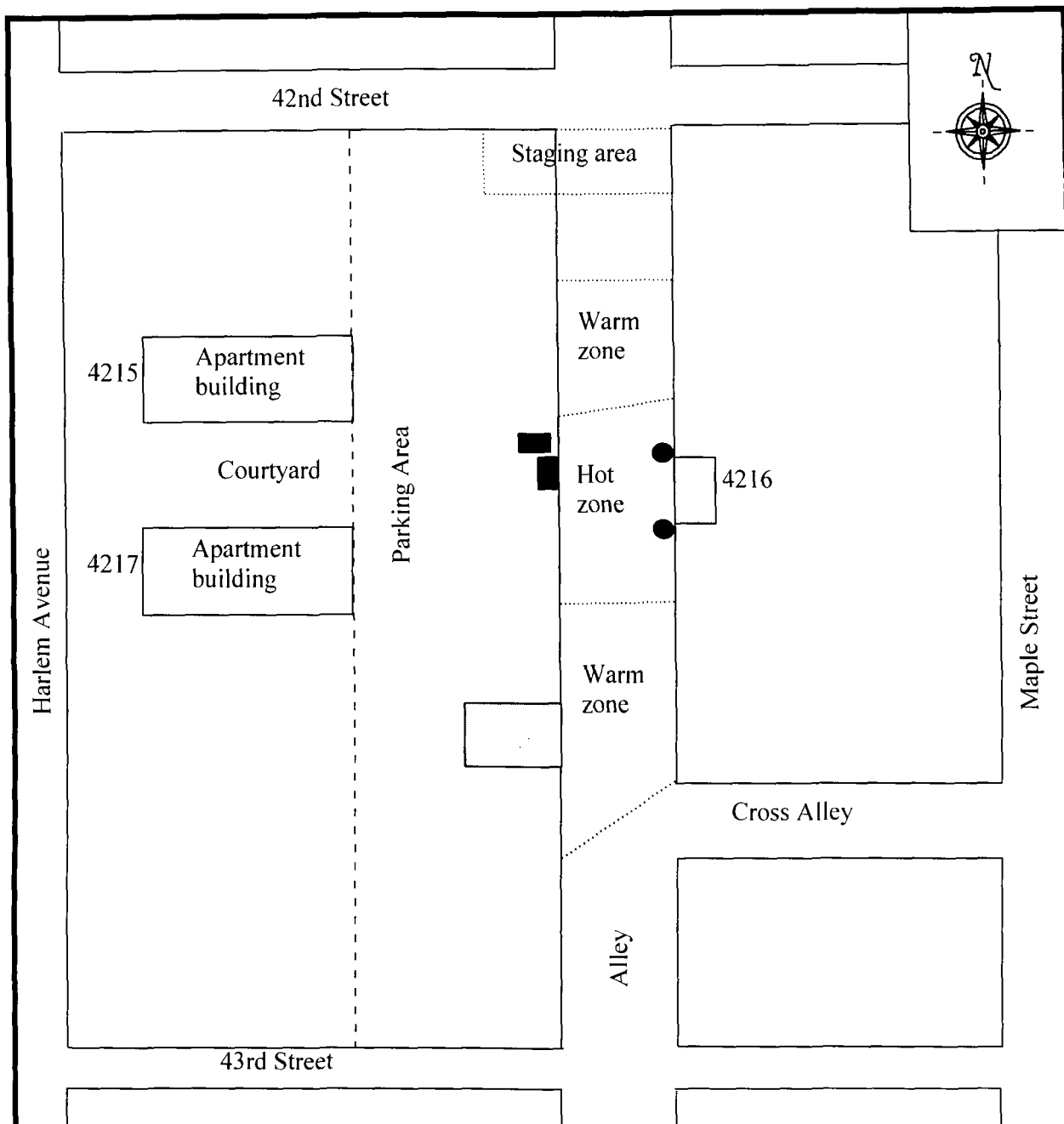


Illinois



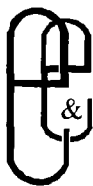
ecology and environment, inc.  
Superfund Technical Assessment and Response Team  
Region 5  
33 North Dearborn Street, Chicago, Illinois 60602

Title	Site Location Map	Figure	1
Site	Stickney Mercury Spill	Scale	1:24,000
City	Stickney	State	Illinois
Source	U.S.G. S. 7.5 Minute Series - Berwyn, IL	TDD	S05-0009-026
	Quadrangle	Date	1963
		Revised	1980



#### Legend

- Roll-out container
- Dumpster
- Garage



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 Region 5  
 33 North Dearborn Street, Chicago, Illinois 60602

Title	Site Features Map	Figure	2
Site	Stickney Mercury Spill	Scale	Not to scale
City	Stickney	State	Illinois
TDD	S05-0009-026	Date	2000
Source	Ecology and Environment, Inc.	Revised	